Miscellanea.

Boston, U.S.—The Fremont Temple, recently destroyed by fire, is to be at once replaced by another, and it is said a better hall. The drawings for the contractors, by last accounts, were finished, and the estimates going on. The music-hall is to be 130 feet long, 78 feet wide, and 65 feet high. The lower floor level, and 78 feet square. The orchestra rises from one extremity, and at the opposite, rises a wall supporting an upper floor, or end gallery. At the back of this rises another wall, supporting a second floor, and, from the end of these, two balconies are carried along the sides of the hall, projecting 8 feet 6 inches from the walls. The front stage of the orchestra rises 4 feet from the floor. The whole orchestra is 30 feet deep and 63 feet long. The walls of the hall have a series of piers which support the balconies, and which are formed, above the upper one, into Corinthian pilasters supporting the cornice of the wall and coving of the ceiling. The hall will be lighted at night by a series of gas-jets along the top of the cornice, which, being placed under the ventilators, will effect the ventilation as well as the illumination of the hall. Corridors are carried, on the level of the floors and balconies, all around the building, communicating with the hall by doors in the side walls at intervals of not more than 15 feet. It is estimated that nearly 3,000 persons can be comfortably accommodated in this hall.

A "Crushing" Scene in California.—The mill was in a state of "entire preparedness,"—so said the knowing superintendent. The stamps, weighing about 1,000 lbs. each, stood in perfect array ready to pulverise whatsoever was placed beneath them. As I approached the crowd about the mill, the "super" was eulogising steam-power, asserting its immense superiority over water-power, inasmuch as it was "so easy of control," and, under scientific management, gave to machinery a more steady and uniform movement. "Now, gentlemen," says he, "there's a good head of steam, and we'll give a little employment to the stampers and shaking-tables." The application of this controllable power (the steam) was made, and my first observation was that, not the tables alone, but the whole machinery and mill, were shaking. The crank attached to the "shaking-tables," which was to give to the quicksilver that "uniform, easy, oily motion," sure to absorb every particle of gold, gave a terrible jerk, and sent the quicksilver in shining globules far from the machines. Up shot one of those 1,000-lbs. stampers, not 12 inches, as had been anticipated, but nearly as many feet. Such a retiring from a "controllable power" and "oily movements" I never before witnessed. The "super" led the van; and up the steep hill side—amid the hissing of steam, the cracking of heavy timbers, the snapping of heavy rods and cranks, the terrible crash upon the descent of the ponderous stampers—the stockholders and spectators scampered. Do you wonder that quartz mining, under such management, should fail to pay?

Copperplated Iron.—It has been suggested that iron for many purposes might be coated with copper by the electrotyping process, thus forming a true galvanised iron.

Cast-Iron Stoves.—The objectionable character of the heat applied through the medium of metal surfaces, as is the case in iron stoves, has for some time past engaged attention: the air is decomposed and rendered unfit for the purposes of respiration: in many private offices I have known these stoves to be sent away; the argument being that they produced headaches, and had a sensibly bad effect in inducing a feeling of oppression in breathing. What I would particularly advocate, is, the use of porcelain and earthenware surfaces: the character of the heat emitted from these is of an agreeable nature, and wholly free from the objections attendant on cast-iron. In my dwelling, I have introduced fire-bricks and glazed tiles for the back and sides of my grates, the front being a simple Oxford front, such as may be obtained for a few shillings.—D. S.

"Steam Superseded."—This heading is so frequently repeated that we would advise the printers to make a standing title of it to save trouble in throwing down and making-up. The *New York Herald* has now got hold of it, in an announcement that "Messrs. Perine, Paterson, and Stack are constructing a vessel, called, after the inventor, the *Ericsson*, of 2,200 tons burthen, which will be fitted with an 'Ericsson' calonic-engine, the first ever placed on board a vessel. This kind of engine is worked by hot air instead of steam, and is said to be far less expensive in working, and to take up less room than those ordinarily employed." Another American paper announces an electro-magnetic engine that is to supersede steam. "Hundreds of visitors," it states, "have witnessed the operation of this engine, the invention of J. S. Gaston, of Treaton, New Jersey, a thing so simple, that the wonder is that its invention has been left until now for Professor Gaston to bring out, and at the same time so successful that no room is left for doubt that electricity as a motor has a practical value. The distinctive feature in this engine from all others heretofore made is, that the great force of attraction in the electro-magnet, with the armature in close proximity, is continued through any required length of stroke, exerting nearly an equal force at all points in the revolution of the crank, enabling the operator to start it as readily, and reverse its motion with the same ease and certainty that is obtained in the steam-engine."

Prevention of Water-Pipes Bursting by Frost.—Mr. A. Macpherson, F.R.S.S.A. has contributed a paper to the *Edinburgh Philosophical Journal*, descriptive of a self-acting apparatus for the prevention of the bursting of water-pipes during frost. The supply-pipe from the main source rises from the ground, forming a curve into a double-action valve box: this supply-pipe is continued into the cistern, which should be above; and a waste-pipe carries the extra water off when the supply is stopped. Under the valve-box is a copper-tube, containing a measured quantity of water, in which works a piston accurately fitted, and passing through a stuffing box, acts upon the valve. A strong air vessel is fitted over the bend of the supply-pipe. If frost acts on the small copper-tube, the water in it will be the first to freeze, expand, and elevate the piston, which pushes up the valve from its seat, and shuts it with great force against the projecting extremity of the ingress supply-pipe. The connection being now open between the continuation-pipe to the cistern and the waste-pipe, the water contained in them descends into the drain, while the air vessel allows of expansion for the water to freeze in the supply-pipe now closed. When the water becomes again liquid the whole pressure is exerted to depress the valve, shut down the piston, and open the supply-pipe.

Public Baths and Washhouses for Norwich.—A public meeting was held at Norwich on Wednesday in week before last, when the committee appointed to dispose of the fund presented by Madlle. Jenny Lind for behoof of the poor, laid before the public plans by Mr. Baily of baths and washhouses, which they proposed to establish if the fund in hand, 1,260*l.* could be increased by donations to 2,000*l.* For this purpose the meeting was adjourned for one month.

Extension of Farringdon-street.—This matter bids fair, after the already almost inexcusable and inexplicable delays, to be thrown over, *sine die*. Of the passing of Mr. Charles Pearson's scheme at present there is not a chance, however desirable this may be. The city authorities are apparently more bent upon the carrying out of improvements within the city, than in improving leading lines of communication without. Why make the street contingent on the railroad, or the railroad on the street? We may surely have both, and both better from being one unconnected with the other. If we are to have the street, let it be done forthwith. To make it in connection with an *in futuro* railway, something that may be some dozen years hence, is "a mockery, a delusion, and a snare," and is simply and virtually shelving the matter. Crito.

Gutta Percha Electrical Apparatus.—Mr. H. Dircks, in a letter to the *Mining Journal*, remarking upon the extreme electrical susceptibility of gutta percha, suggests its applicability to the formation of cheap electrical machines, by covering a disc of hard baked wood with a thin coat of gutta percha, neatly joined, so as to revolve smoothly. The electrophorus could be made of a single thin circular sheet of gutta percha, attached to a larger metal plate. One peculiarity of such a machine would be, that experiments might be made with the electro-negative force, about which, we will venture to say, much less is known than of the electro-positive. The relationship of the electro-negative to the actinic principle in the solar ray, we long since pointed out, and we do think that the suggestion of so cheap and easily got-up an electro-negative machine is a valuable one, even with reference to this view of the nature and relations of the electro-negative.

Alabaster Monument.—The tomb and effigy of the late Earl of Powis, executed in alabaster by Mr. Richardson, after a design by Mr. Scott, has been during the last few days safely fixed in its niche, in the north wall of the chancel of St. Mary's Church, Welchpool. The arch is carved by Mr. Phillip, and the brasses by Mr. Waller. The figure is in the robes of the Garter; and the portrait was obtained from a painting by Grant, at Walcot-park.

Liverpool Architectural Society.—At the fifteenth annual meeting of the Architectural Society, Mr. Verelest in the chair, Mr. Horner produced a design for placing the organ in St. George's Hall, the great object of the architect being to retain the perspective view from the Hall to the Nisi Prius Court. Among other papers, one was read by Mr. J. Boult, on "The Proposed Breakwater on the Mersey."

Society of Antiquaries of London.—At the anniversary meeting, last week, Lord Mahon announced a legacy to the Society of no less a sum than 16,000*l.* The following were elected the Council for the year:—Lord Mahon, President; Sir R. H. Inglis, the Bishop of Oxford, Mr. J. P. Collier, and Captain Smyth, Vice-Presidents; Viscount Strangford, Director; Mr. John Bruce, Treasurer; Sir H. Ellis and Mr. Akerman, Secretaries; and Mr. Joseph Gwilt; the Hon. R. C. Neville; Mr. James Prior; the Earl of Albemarle; Rev. Dr. Bosworth; Mr. George Godwin; Dr. Guest; Messrs. A. B. Hope, M.P.; T. W. King; Octavius Morgan, M.P.; H. Shaw, and B. Williams.

TENDERS

For the erection of a hotel at Southerndown, near Bridgend, Glamorganshire, the stone upon the estate. Mr. John B. Leddon, architect.

James (Cardiff)	£1,700	0	0
Davies (New Castle, Emlyn)	1,453	19	6
Bowden (Bristol)	1,340	0	0
Brown (ditto), accepted	1,330	0	0
Jenkins (Bridgend), not in time	1,304	0	0

For villa residence near Reigate. Mr. W. Beck, architect. Quantities furnished to Reigate builders by Mr. Matthews, Reigate.

Cooper (London)	£1,327	0	0
Rose (Reigate)	1,112	0	0
Holdsworth (ditto)	1,047	0	0
Comber (ditto)	993	15	0
Smith (London)	984	0	0

(The cost of taking out the quantities was added to the Reigate and not to the London builders.)

For addition to the Corn Exchange, Mark-lane, City. Mr. George Legg, Architect, of Duke-street.

Higgs	£5,945	0	0
Holland	5,145	0	0
Locke and Nesham	5,117	0	0
Cubitt	4,980	0	0
Piper	4,780	0	0
Myers	4,761	0	0

For taking down and rebuilding house, Hollis-street, Cavendish-square. Mr. Marshall, architect.

T. Anson	£3,086	0	0
Smith and Appleford	2,039	0	0
Burton	1,881	0	0
Roper and Son (accepted)	1,875	0	0

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